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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/364,522	07/30/1999	ERIC HORVITZ	1018.028US1	9572

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CLEVELAND, OH 44114

EXAMINER

SINGH, RACHNA

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 06/18/2003

1/

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/364,522	<b>Applicant(s)</b> HORVITZ ET AL.	
	<b>Examiner</b> Rachna Singh	<b>Art Unit</b> 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/28/03.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This action is responsive to communications: application, filed 07/30/99; amendment filed 3/28/03.
2. Claims 1-43 are pending in the case. Claims 1, 13, 19, and 26 are independent claims.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 8-12, 22-25, 26-27, 30-33, 35, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, "Evaluating and Optimizing Autonomous Text Classification Systems", 1995 ACM.

In reference to Independent claim 1, Lewis teaches a text retrieval system that produces a ranking of documents. The ranked retrieval system display documents in order of probability of relevance or some measure determined by a text categorization system. See page 246. Compare to ***"receiving a document; generating a priority of the document based on a document classifier"***. Lewis further teaches a system in which outputting the rank or priority of a document comprises the step of alerting the user based on the priority. See page 246. Compare to ***"alerting a user to the document based on a predetermined criteria"***. It would have been obvious to one of ordinary skill in the art at the time of the invention to prioritize documents according to a

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document classifier and to alert the user of the effectiveness of viewing the document according to the document classifier since it optimizes the effectiveness of processing new data. See abstract of Lewis in which he discusses document retrieval, ranking, and alerts.

In reference to claim 8, Lewis teaches the use of an agent program which monitors and alerts a user when a relevant message appears based on the ranked retrieval system. See page 246.

In reference to claim 9, Lewis teaches alerting the user based on a priority within a predetermined priority range. See page 246.

In reference to claim 10, Lewis discloses a document categorization system that determines the cost of a document and ranks the retrieval of the system. The user is alerted when text considered to be relevant appears. The system determines the effectiveness of reviewing a document using a text classifier. See pages 246-249. Lewis does not state determining if the user is busy; however, he does take into account the expected loss of non-review and alerts the user based on that. It would have been obvious to one of ordinary skill in the art to determine if the user was busy or not since it takes into account the loss of not reviewing a message at the given time.

In reference to claim 11, Lewis teaches ranking documents such that the best documents are displayed first followed by the ranking of other documents. See page 246.

In reference to claim 12, Lewis teaches ranking the documents according to some predefined criteria. Setting a threshold at one of the predetermined criteria (such

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as importance or rank) would have been obvious to one of ordinary skill in the art at the time of the invention as a means of filtering out less important documents.

Claims 22-25 are rejected under the same rationale used in claims 8-11 respectively above.

Claim 26 is rejected under the same rationale used in claim 1 above.

In reference to claim 27, Lewis teaches filtering documents based on priority. See page 246.

In reference to claims 30 and 31, Lewis discloses a system in which an agent program monitors text streams and alerts a user when a relevant message appears. Lewis' system takes into account the expected cost of non-review at a current time and delivers the message depending on certain criteria. Thus if there is not an expected loss of non-review, the message can viewed at a future time. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lewis' system to take into account if a user was busy as he does take into account the expected loss of non-review and alerts the user based on that. It would have been obvious to one of ordinary skill in the art to determine if the user was busy or not since it takes into account the loss of not reviewing a message at the given time.

In reference to claims 32 and 33, Lewis discloses a document categorization system determines the cost of a document and ranks the retrieval of the system. The user is alerted when document considered to be relevant appears. The system determines the effectiveness of reviewing a document using a document classifier. See pages 246-249.

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In reference to claim 35, Cohen discloses the use of a Bayesian text classifier.

See page 1, column 2 and page 3.

Claim 41 is rejected based on the same rationale used in claim 9 above.

Claim 42 is rejected based on the same rationale used in claim 10 above.

In reference to claim 43, it was well-known in the art at the time of the invention to utilize computer programs for performing steps such as alerting, classifying.

5. Claims 2, 19-20, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, "Evaluating and Optimizing Autonomous Text Classification Systems", 1995 ACM in view of Cohen, "Learning Rules that Classify E-Mail", 1996 (as disclosed at <http://www-2.cs.cmu.edu/~wcohen/pubs-t.html>).

In reference to claim 2, Cohen teaches a method in which the text comprises receiving an email. See pages 1-3. Both Cohen and Lewis are concerned with classifying text according to a text classifier thus it would have been obvious to one of ordinary skill in the art to combine the two.

Claims 19-20 are rejected under the same rationale used in claims 1-2 above.

Claim 34 is rejected under the same rationale as claim 2 above.

6. Claims 3-7, 21, 28-29, and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, "Evaluating and Optimizing Autonomous Text Classification Systems", 1995 ACM, as applied to claims 1, 19, and 26 above, in view of Henderson et al., US Patent 6,185,603 B1, 2/6/01 (filed 3/13/97).

In reference to claim 3, while Lewis teaches alerting users of the rankings of the documents; he does expressly state playing a sound based on the predetermined

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criteria. Henderson, however, teaches a method and system for delivery of e-mail and alerting messages. Henderson discusses that many electronic mail systems utilize an audible tone to alert users of a received document. Henderson teaches a system in which codes or "predetermined criteria" indicates in what manner an alert message will be displayed. This can be done via phone, facsimile, pagers, etc. Henderson teaches a system in which the importance of a document is taken into account when providing alerts (such as audible tones) to the user. See columns 1-4. It would have been obvious to one of ordinary skill in the art at the time of then invention to incorporate the ranking of Henderson's ranking system with Lewis's ranking system as Henderson suggests that alerts should take into account the importance or rank of a document. See column 1.

In reference to claim 4, Lewis does not expressly state opening the document based on the predetermined criteria; however, Henderson does. Henderson teaches a means in which a message can be opened on a recipient's workstation based on the predetermined code. See column 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lewis' alerts with a means for opening the document based on the criteria as taught by Henderson since both Lewis and Henderson are concerned with the ranking, delivery, and alerting of messages to a user. Both Henderson and Lewis are of analogous art.

In reference to claim 5, Henderson teaches a system in which the user can control the display features of an email message. In column 8, Henderson discloses that messages having difference priority display attributes can be displayed in different

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sizes. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lewis' alerts with a means for opening the document based on the criteria as taught by Henderson since both Lewis and Henderson are concerned with the ranking, delivery, and alerting of messages to a user. Both Henderson and Lewis are of analogous art.

In reference to claim 6, Henderson teaches a system in which the user can control the display features of an email message. This can include centrally locating the document.

In reference to claim 7, Henderson teaches a system in which the user can control the display features of an email message. Display features can include the document focus. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lewis' alerts with a means for controlling display features of the document based on the criteria as taught by Henderson since both Lewis and Henderson are concerned with the ranking, delivery, and alerting of messages to a user. Both Henderson and Lewis are of analogous art.

Claim 21 is rejected under the same rationale used in claims 3 and 4 above.

In reference to claim 28, while Lewis teaches alerting users of the rankings of the documents; he does expressly state playing a sound based on the predetermined criteria. Henderson, however, teaches a method and system for delivery of e-mail and alerting messages. Henderson discusses that many electronic mail systems utilize an audible tone to alert users of a received document. Henderson teaches a system in which codes or "predetermined criteria" indicates in what manner an alert message will



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be displayed. This can be done via phone, facsimile, pagers, etc. Henderson teaches a system in which the importance of a document is taken into account when providing alerts (such as audible tones) to the user. See columns 1-4. It would have been obvious to one of ordinary skill in the art at the time of then invention to incorporate the ranking of Henderson's ranking system with Lewis's ranking system as Henderson suggests that alerts should take into account the importance or rank of a document. See column 1.

In reference to claim 29, Lewis teaches ranking the documents according to some predefined criteria. Setting a threshold at one of the predetermined criteria (such as importance or rank) would have been obvious to one of ordinary skill in the art at the time of the invention as a means of filtering out less important documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cohen's document classification for prioritizing text with Lewis's text classification for alerting user since both are of analogous art in the field of document classification for prioritization. It was well known to prioritize documents according to a document classifier and to alert the user of the effectiveness of viewing the document according to the document classifier. See abstract of Lewis in which he discusses document retrieval and ranking and alerts. Henderson teaches specifying document display criteria including sizing and centering of documents based on criteria. See column 8. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lewis' alerts with a means for opening the document based on the criteria as taught by Henderson since both Lewis and Henderson are concerned with the ranking,

not in  
Henderson

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delivery, and alerting of messages to a user. Both Henderson and Lewis are of analogous art.

Claim 37 is rejected based on the same rationale used in claim 3 above.

Claim 38 is rejected based on the same rationale used in claim 4 above.

Claim 39 is rejected based on the same rationale used in claim 6 above.

Claim 40 is rejected based on the same rationale used in claim 5 above.

7. Claims 13-18 and 36<sup>2b</sup> are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, "Evaluating and Optimizing Autonomous Text Classification Systems", 1995 ACM in view of Cohen, "Learning Rules that Classify E-Mail", 1996 (as disclosed at <http://www-2.cs.cmu.edu/~wcohen/pubs-t.html>) and Platt, US Patent 6,327,581, 12/4/01 (filed 4/6/98).

In reference to claim 13, Cohen discloses the use of a Bayesian text classifier. See page 1, column 2 and page 3. Cohen teaches training text classifiers. See page 2, *Learning Algorithms*. Cohen teaches the use of training data and training sets. Cohen does not disclose training a document classifier comprising a support-vector machine classifier; however, Platt teaches a method of building a support-vector machine based classifier. Since it was well known in the art at the time of the invention to utilize a support vector machine classifier, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a document classifier for prioritizing documents using a support-vector machine classifier. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lewis and Cohen since both are concerned with text classifiers and are of analogous art.

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Cohen teaches using text classifiers for filtering and filing e-mail messages. Cohen teaches prioritizing unread mail using a text classifier. Using classification rules, text categorization algorithms are used to prioritize text. Compare to ***“receiving a document; generating a priority of the document based on a document classifier;”***. See page 1-3 and page 5. Cohen does not teach alerting a user to the document based on a predetermined criteria; however, Lewis does. Lewis teaches a system in which outputting the rank or priority of a document comprises the step of alerting the user based on the priority. Compare to ***“alerting a user to the document based on a predetermined criteria.”*** See page 246. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cohen’s document classification for prioritizing text with Lewis’s text classification for alerting user since both are of analogous art in the field of document classification for prioritization. It was well known to prioritize documents according to a document classifier and to alert the user of the effectiveness of viewing the document according to the document classifier. See abstract of Lewis in which he discusses document retrieval and ranking and alerts. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lewis and Cohen since both are concerned with text classifiers and are of analogous art.

Claim 14 incorporates limitations of claim 13 above and is further rejected under the same rationale used in claims 3 and 4 above.

Claims 15-18 incorporate limitations of claim 13 above and are further rejected under the same rationale used in claims 8-11 respectively above.

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*Cohen { used for art*

In reference to claim 36, Cohen does not disclose the document classifier comprising a support-vector machine classifier; however, Platt teaches a method of building a support-vector machine based classifier. Since it was well known in the art at the time of the invention to utilize a support vector machine classifier, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a document classifier for prioritizing document using a support-vector machine classifier. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lewis and Cohen since both are concerned with text classifiers and are of analogous art.

### ***Response to Arguments***

8. In reference to independent claims 1, 19, and 26, Applicant argues that Cohen's teachings of a classifier are for classifying emails and not prioritizing them. Examiner has provided a new grounds for rejection in which Lewis teaches a text classifier for prioritizing documents. See rejections above.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Angotti et al.	US 6,182,059
Shuman	US 6,424,995
Takahashi et al.	US 6,442,589
Shaw et al.	US 6,282,565
Johnson et al.	US 5,694,616

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Wong                      US 5,974,465

Scannell et al.        US 5,377,354

-Lewis, David, "Training Algorithms for Linear Text Classifiers", AT&T Laboratories,  
1996

-Apte, Chidanand, Fred Damerau, and Sholom M. Weiss, "Automated Learning of  
Decision Rules for Text Categorization", 1994 ACM.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh at 703.305.1952. The examiner can normally be reached on Monday-Friday from 8:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached at 703.308.5186.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703.305.3900.

**Any response to this action should be mailed to:**

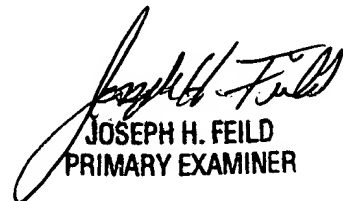
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**or faxed to:**

<b>After-Final</b>	<b>703.746.7238</b>
<b>Official</b>	<b>703.746.7239</b>
<b>Non-Official/Draft</b>	<b>703.746.7240</b>

Hand-Delivered responses should be brought to Crystal park II, 2121 Crystal Drive, Arlington VA., Sixth Floor (Receptionist).

Rachna Singh  
June 3, 2003

  
JOSEPH H. FEILD  
PRIMARY EXAMINER